

ABSTRACT OF THE DISCLOSURE

5 A method for protecting a peptide from peptidase activity *in vivo*,
the peptide being composed of between 2 and 50 amino acids and
having a C-terminus and an N-terminus and a C-terminus amino acid
and an N-terminus amino acid is described. In the first step of the
method, the peptide is modified by attaching a reactive group to the C-
10 terminus amino acid, to the N-terminus amino acid, or to an amino acid
located between the N-terminus and the C-terminus, such that the
modified peptide is capable of forming a covalent bond *in vivo* with a
reactive functionality on a blood component. In the next step, a covalent
bond is formed between the reactive group and a reactive functionality
15 on a blood component to form a peptide-blood component conjugate,
thereby protecting said peptide from peptidase activity. The final step of
the method involves the analyzing of the stability of the peptide-blood
component conjugate to assess the protection of the peptide from
peptidase activity.

20